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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,347	09/12/2003	Osamu Imai	796_031	6749
25191	7590	10/10/2006		
BURR & BROWN PO BOX 7068 SYRACUSE, NY 13261-7068			EXAMINER BOLDEN, ELIZABETH A	
			ART UNIT 1755	PAPER NUMBER

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/661,347

Applicant(s)

IMAI ET AL.

Examiner

Elizabeth A. Bolden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                   |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/1/05, 2/9/04, 3/17/05</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I, claims 1-6 and 20, in the reply filed on 6 July 2006 is acknowledged.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The IDS submitted 9 February 2004, 17 March 2005, and 1 November 2005 have been considered by the Examiner. The Examiner has change the Country from Germany to Great Britian on the 17 March 2005 IDS for the patent number 1 485 800 as this matches the prior art submitted with the IDS. Additionally, the references cited on the 1 November IDS have been marked off as duplicates as the two patents are listed on the 9 February 2004 IDS.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a glaze composition containing a KNaO-MgO-CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> base glaze define by the Serger formula, then recites the three components: KNa, MgO, and CaO, with Serger formula values ranges for only 2 of the components states the balance, respectively, No composition ranges or Serger formula values are give for Al<sub>2</sub>O<sub>3</sub> or SiO<sub>2</sub>. This is confusing and renders the claim indefinite. Furthermore, the Serger formula ranges do not in practice define the composition in terms of mole percent or weight percent. The claim also use weight

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percent terminology for the amount of flux. The compositional components of the glaze should be all listed in terms of weight percent.

As to claims 3-6, the recitations of the mixture of the use of the Serger formula values and weight percentages is confusing based on the instant independent claim 1 and renders these claims indefinite.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al., U.S. Patent 4,262,185 in view of Cullen, Ceramic Glazes, pages 274-277 and 426-427.

Higuchi et al. teach an electrical insulated having a coating with a semiconducting glaze as recited in claim 9. See column 1, lines 5-19 and column 7, lines 19-27. Higuchi et al. teach a glaze composition having anticipating or overlapping ranges of components with instant claims 1 and 3-6. See column 5, lines 7-18 and Table 1 with specific attention to Examples 1b, 1c, 2e, and 3g.

Higuchi fails to teach specifically teach the use of a flux in addition to the  $\text{SnO}_2$  and  $\text{Sb}_2\text{O}_3$  and the base glaze of  $\text{KNaO-MgO-CaO-Al}_2\text{O}_3\text{-SiO}_2$ .

Cullen teaches that the glaze composition and the initial components of the batch composition result in how the glaze functions and homogeneity of the glaze. See pages 274. Cullen teaches that the addition of a low temperature fluxing material leads to better homogeneity. Cullen further states that  $\text{B}_2\text{O}_3$  is a common fluxing agent. See pages 221-225, 276-277, 330-331, 426-427, and 454-456.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the fluxing agents of Cullen to the glaze composition of Higuchi et al. because the resulting glass would have good flow and homogeneity properties.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 571-272-1363. The examiner can normally be reached on 10 am to 8:30 pm every Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**\*\* Please note that the Examiner, Elizabeth A. Bolden will be out of the office for an extended period of time starting on 30 October 2006 and returning approximately 18 December 2006. You can leave me a voicemail message, which I will try to check intermittently, otherwise please contact my supervisor Jerry Lorengo at the above telephone number. Sorry for this inconvenience. \*\***

EAB

2 October 2006

  
J. A. LORENGO  
SUPERVISORY PATENT EXAMINER